Comparison Tables: Center for Health Systems Research and Analysis (CHSRA) Quality Indicators & Publicly Reported Quality Measures (QMs)

Prepared by: Rhode Island Quality Partners, Inc. & the Colorado Foundation for Medical Care Nursing Home Quality Improvement Organization Support Contractors

Table A1: Overview of QMs and C	HSRA Quality	/ Indicators
QM Measure	Corresponding CHSRA QI?	Corresponding Page #s
Chronic Care Mea	sures	
The Percentage of Residents Who Had an Unexpected Loss of Function in Some Basic Daily Activities	Yes	2 - 3
The Percentage of Residents With Infections	Yes*	4 - 5
The Percentage of Residents With Pain	No	6
The Percentage of Residents With Pressure Sores	Yes	7 – 8
The Percentage of Residents in Physical Restraints	Yes	9
Post-Acute Care (PAC)	Measures	
The Percentage of Short-Stay Residents With Delirium	No	10 – 11
The Percentage of Short-Stay Residents With Pain	No	12
The Percentage of Short-Stay Residents Who Walk as Well or Better on Day 14 as on Day 5 of their stay	No	13 - 14

^{*} The QM related to infections assesses a spectrum of infections; the corresponding CHSRA QI includes only urinary tract infections (UTIs).

Table A2: ADL Decline	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents Who Had an Unexpected Loss of Function in Some Basic Daily Activities	Title: Incidence of Decline in Late Loss ADLs.
Assessments Used: Target assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be within 3 months of the end of the target date. Prior assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be in the window of 46 days to 165 days preceding the target assessment reference date.	Target assessment: AA8a = 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be in the specified target period (default target period is six months). Note that admissions assessments (AA8a = 01) are not eligible for measure calculation. Prior assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) can be any time prior to the target assessment reference date.
Numerator: Residents meet the definition of Late-Loss ADL worsening when at least two of the following are true: 1. G1a(A)[t] - G1a(A)[t-1] > 0, or 2. G1b(A)[t] - G1b(A)[t-1] > 0, or 3. G1h(A)[t] - G1h(A)[t-1] > 0, or 4. G1i(A)[t] - G1i(A)[t-1] > 0, OR at least one of the following is true: 1. G1a(A)[t] - G1a(A)[t-1] > 1, or 2. G1b(A)[t] - G1b(A)[t-1] > 1, or 3. G1h(A)[t] - G1h(A)[t-1] > 1, or 4. G1i(A)[t] - G1i(A)[t-1] > 1. Notes: • [t] refers to target assessment, [t-1] refers to prior assessment. • Late-Loss ADL items values of 8 are recoded to 4 for evaluation of change.	Numerator: Residents meet the definition of Late-Loss ADL worsening when at least two of the following are true: 1. G1a(A)[t] - G1a(A)[t-1] > 0, or 2. G1b(A)[t] - G1b(A)[t-1] > 0, or 3. G1h(A)[t] - G1h(A)[t-1] > 0, or 4. G1i(A)[t] - G1i(A)[t-1] > 0, OR at least one of the following is true: 1. G1a(A)[t] - G1a(A)[t-1] > 1, or 2. G1b(A)[t] - G1b(A)[t-1] > 1, or 3. G1h(A)[t] - G1h(A)[t-1] > 1, or 4. G1i(A)[t] - G1i(A)[t-1] > 1. Notes: • [t] refers to target assessment, [t-1] refers to prior assessment. • Late-Loss ADL items values of 8 are considered missing for evaluation of change.
Denominator: All residents with a target and a prior assessment (after exclusions are applied).	Denominator: All residents with a target and a prior assessment (after exclusions are applied).
Risk adjustment strategies used: ExclusionYes StratificationNo	Risk adjustment strategies used: ExclusionYes StratificationNo

Table A2: ADL Decline	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents Who Had an Unexpected Loss of Function in Some Basic Daily Activities	Title: Incidence of Decline in Late Loss ADLs.
RegressionNo	RegressionNo
 Residents meeting any of the following conditions: None of the four Late-Loss ADLs (G1a(A), G1b(A), G1h(A), and G1i(A)) can show decline because each of the four have a value of 4 (total dependence) or a value 8 (activity did not occur) on the prior assessment [t-1]. The QM did not trigger (resident not included in the numerator) AND there is missing data on any one of the four Late-Loss ADLs (G1a(A), G1b(A), G1h(A), or G1i(A)) on the target assessment [t] or prior assessment [t-1]. The resident is comatose (B1 = 1) or comatose status is unknown (B1 = missing) on the target assessment. The resident has end-stage disease (J5c = checked) or end-stage disease status is unknown (J5c = missing) on the target assessment. The resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the target assessment or the most recent full assessment. All residents in a facility with a Chronic Care Admission Sample size of 0. The Chronic Care Admission Sample is 0 if there are no residents with a non-PPS admission assessment (AA8a=01 and AA8b=blank or 6) over the previous 12 months. 	 Residents meeting any of the following conditions: All of the ADLs (G1a(A) through G1j(A)) have a value of 4 (total dependence) or a value 8 (activity did not occur) on the prior assessment [t-1]. The QI did not trigger (resident not included in the numerator) AND there is missing data on any one of the four Late-Loss ADLs (G1a(A), G1b(A), G1h(A), or G1i(A)) on the target assessment [t] or prior assessment [t-1]. The resident is comatose (B1 = 1) on the prior assessment.
Stratification procedure: None	Stratification procedure: None
Regression procedure: FAPNone Clinical covariatesNone	Regression procedure: None

Table A3:	Infections
Publicly Reported Quality Measure	Corresponding CHSRA QI
 Title: The Percentage of Residents With Infections Assessments Used: Target assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be within 3 months of the end of the target date. Note that admissions assessments (AA8a = 01) are excluded from measure calculations. Most recent full assessment: AA8a = 01, 02, 03, or 04. Assessment reference date (A3a) must be within 17 months preceding the target assessment reference date. The most recent full assessment is used, if necessary, to fill in data items which may not be collected on the target assessment. 	Assessments Used: Target assessment: AA8a = 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be in the specified target period (default target period is six months). Note that admissions assessments (AA8a = 01) are not eligible for measure calculation.
Residents with any of the following infections or health conditions noted on the target or most recent full assessment only if the most recent full assessment is a non-admission assessment with AA8a = 02, 03, or 04. 1. Pneumonia (I2e = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 2. Respiratory infection (I2f = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 3. Septicemia (I2g = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 4. Urinary tract infection (I2j = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 6. Wound infection (I2l = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment), 7. Fever (J1h = checked) on the target assessment or most recent full assessment (if the most recent full is a non-admission assessment),	Numerator: Urinary tract infection (I2j) is checked.

Table A3: Infections	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents With Infections	Title: Prevalence of UTIs
8. Recurrent lung aspiration (J1k = checked) on the target	
assessment or most recent full assessment (if the most	
recent full is a non-admission assessment). Denominator:	Denominator:
All residents with a target assessment (after exclusions are	All residents with a target assessment (after exclusions are
applied).	applied).
Risk adjustment strategies used:	Risk adjustment strategies used:
ExclusionYes	ExclusionNo
Stratification No	StratificationNo
RegressionNo	RegressionNo
Exclusions:	Exclusions:
Residents satisfying any of the following conditions:	None
The target assessment is an admission assessment	
(AA8a = 01).	
2. The QM did not trigger (resident is not included in the QM	
numerator) AND the urinary tract infection item (I2j) is missing on the target assessment.	
3. The QM did not trigger and the value of any of the other	
infections or health conditions (I2e, I2f, I2g, I2k, I2l, J1h, or	
J1k) selected from the target assessments or most recent	
full assessment is missing.	
4. The resident has end-stage disease (J5c = checked) or status is unknown (J5c = missing) on the target	
assessment.	
5. The resident is receiving hospice care (P1ao = checked) or	
hospice status is unknown (P1ao = missing) on the target	
assessment or the most recent full assessment.	
6. All residents in a facility with a Chronic Care Admission	
Sample size of 0. The Chronic Care Admission Sample is 0 if there are no residents with a non-PPS admission	
assessment (AA8a=01 and AA8b=blank or 6) over the	
previous 12 months.	
Stratification procedure:	Stratification procedure:
None	None
Regression procedure:	Regression procedure:
FAPNone Clinical covariatesNone	None
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Table A4: Pain (Chronic Care)	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents With Pain (Chronic Care)	Title: No comparable QI
Assessments Used: Target assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be within 3 months of the end of the target date. Note that admissions assessments (AA8a = 01) are excluded from measure calculations.	Assessments Used:
Numerator: Residents with moderate pain at least daily (J2a = 2 AND J2b = 2) OR horrible/excruciating pain at any frequency (J2b = 3) on the target assessment.	Numerator:
Denominator: All residents with a target assessment (after exclusions are applied).	Denominator:
Risk adjustment strategies used: ExclusionYes StratificationNo RegressionYes	Risk adjustment strategies used:
 Exclusions: Residents meeting any of the following conditions: 1. The target assessment is an admission assessment (AA8a = 01). 2. Either J2a or J2b is missing on the target assessment. 3. The values of J2a and J2b are inconsistent on the target assessment. (An example of inconsistent coding would include the coding of pain frequency as "no pain" while intensity of pain is simultaneously coded as "moderate" pain.) 4. All residents in a facility with a Chronic Care Admission Sample size of 0. The Chronic Care Admission Sample is 0 if there are no residents with a non-PPS admission assessment (AA8a=01 and AA8b=blank or 6) over the previous 12 months. Stratification procedure: None 	Stratification procedure:
Regression procedure: Facility Admission Profile: None Clinical covariate: Indicator of independence or modified independence in daily decision making on the prior assessment if B4 = 0 or 1.	Regression procedure:

Table A5: Pressure Sores	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents With Pressure Sores*	Title: Prevalence of Stage 1-4 Pressure Ulcers
Target assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be within 3 months of the end of the target date. Note that admissions assessments (AA8a = 01) are excluded from measure calculations. FAP assessment: AA8a/AA8b = 01/blank or 01/6. Assessment reference date (A3a) must be in the 12 months preceding the end of the target date.	Target assessment: AA8a = 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be in the specified target period (default target period is six months). Note that admissions assessments (AA8a = 01) are not eligible for measure calculation.
Numerator: Residents with pressure sores (Stage 1-4) on target assessment (M2a > 0 OR I3a-e = 707.0).	Numerator: Residents with pressure ulcers (Stage 1-4) on target assessment (M2a > 0 OR I3a-e = 707.0).
Denominator: All residents with a target assessment (after exclusions are applied).	Denominator: All residents with a target assessment (after exclusions are applied).
Risk adjustment strategies used: ExclusionYes StratificationNo Regression*Yes	Risk adjustment strategies used: ExclusionYes StratificationYes RegressionNo
 Exclusions: Residents meeting any of the following conditions: The target assessment is an admission (AA8a = 01) assessment. The QM did not trigger (resident is not included in the QM numerator) AND the value of M2a is missing on the target assessment. All residents in a facility with a Chronic Care Admission Sample size of 0. The Chronic Care Admission Sample is 0 if there are no residents with a non-PPS admission assessment (AA8a=01 and AA8b=blank or 6) over the previous 12 months. 	Exclusions: 1. The QI did not trigger (resident is not included in the QI numerator) AND the value of M2a is missing on the target assessment.

^{*}Note: This QM is reported both with an additional level of risk adjustment (i.e. with and without the FAP adjustments).

Table A5: Pressure Sores	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents With Pressure Sores	Title: Prevalence of Stage 1-4 Pressure Ulcers
Stratification procedure: None	Stratification procedure: High risk Impaired transfer of bed mobility (G1a(A) or G1b(B) = 3 or 4 OR Comatose (B1 = 1) OR Malnutrition I3 = ICD-9 CM 260, 261, 262, 263.0, 263.1, 263.2, 263.8, or 263.9 OR End stage disease (J5c = 1). Low risk: All other residents with a target assessment. Note: This QI is reported without risk adjustment (i.e., for all residents with a target assessment) and for high- and low-risk groups separately.
 Regression procedure: Facility admission profile*: Prevalence of stage1-4 pressure sores (M2a > 0 OR I3a-e = 707.0) among admissions (AA8a = 01) occurring over previous 12 months. Numerator: Admission assessments (AA8a = 01) with M2a > 0 OR I3a-e = 707.0. Denominator: All admission assessments (AA8a = 01). Exclusions: Admission assessments (AA8a = 01) that do not satisfy the numerator condition AND that have missing data on M2a. 	Regression procedure: None
Clinical covariates: None *Note: This QM is reported both with an additional level of risk adjustment	

^{*}Note: This QM is reported both with an additional level of risk adjustment (i.e. with and without the FAP adjustments).

Table A6: Restraints	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Residents in Physical Restraints Assessments Used:	Title: Prevalence of Daily Physical Restraints Assessments Used:
Target assessment: AA8a = 01, 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be within 3 months of the end of the target date. Note that admissions assessments (AA8a = 01) are excluded from measure calculations.	Target assessment: AA8a = 02, 03, 04, 05, or 10. Assessment reference date (A3a) must be in the specified target period (default target period is six months). Note that admissions assessments (AA8a = 01) are not eligible for measure calculation.
Numerator: Residents who were physically restrained daily (P4c or P4d or P4e = 2) on target assessment.	Numerator: Residents who were physically restrained daily (P4c or P4d or P4e = 2) on target assessment.
Denominator: All residents with a target assessment (after exclusions are applied).	Denominator: All residents with a target assessment (after exclusions are applied).
Risk adjustment strategies used: ExclusionYes StratificationNo RegressionNo	Risk adjustment strategies used: ExclusionYes StratificationNo RegressionNo
 Exclusions: Residents meeting any of the following conditions: 1. The target assessment is an admission (AA8a = 01) assessment. 2. The QM is not triggered (numerator condition not satisfied) AND P4c, P4d, or P4e has a missing value. 3. All residents in a facility with a Chronic Care Admission Sample size of 0. The Chronic Care Admission Sample is 0 if there are no residents with a non-PPS admission assessment (AA8a=01 and AA8b=blank or 6) over the previous 12 months. 	Exclusions: Residents meeting any of the following conditions: 1. The QI is not triggered (numerator condition not satisfied) AND P4c, P4d, or P4e has a missing value.
Stratification procedure: None	Stratification procedure: None
Regression procedure: FAPNone Clinical covariatesNone	Regression procedure: None

Table A7: Short-Stay Delirium	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Short-Stay Residents With Delirium*	Title: No comparable QI
 SNF PPS 14-Day assessment: AA8b = 7. Assessment reference date (A3a) must be within 6 months of the end of the target date. SNF PPS 5-Day assessment: AA8b = 1. Assessment reference date (A3a) must be in the window of 3 days to 18 days prior to the selected 14-day assessment (may be used for covariate calculations). FAP Assessment: SNF PPS 5-Day assessment: AA8b = 1 and reference date (A3a) must be in the 12 months preceding the end of the target period. 	Assessments Used:
Numerator: Residents at SNF PPS 14-day assessment with at least one symptom of delirium that represents a departure from usual functioning (at least one B5a through B5f = 2).	Numerator:
Denominator: All residents with an SNF PPS 14-day assessment (AA8b = 7) (after exclusions are applied).	Denominator:
Risk adjustment strategies used: Exclusion	Risk adjustment strategies used:
 Exclusions: Residents satisfying any of the following conditions: 1. Comatose (B1 = 1) or comatose status unknown (B1 = missing) on the SNF PPS 14-day assessment. 2. Residents with end-stage disease (J5c = checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14-day assessment. 3. Resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao = missing) on the SNF PPS 14-day assessment. 4. The QM did not trigger (resident not included in the numerator) and there is a missing value on any of the items B5a through B5f on the SNF PPS 14-day assessment. 5. All residents in a facility with a Post Acute Care Admission 	Exclusions:

Table A7: Short-Stay Delirium		
Publicly Reported Quality Measure	Corresponding CHSRA QI	
Title: The Percentage of Short-Stay Residents With Delirium*	Title: No comparable QI	
Sample size of 0. The Post Acute Care Admission Sample is 0 if there are no residents with PPS 5-day assessment (AA8b = 1) over previous 12 months.		
Stratification procedure:	Stratification procedure:	
None	·	
 Facility admission profile*: Proportion of residents with at least one symptom of delirium that represents a departure from normal functioning demonstrated on SNF PPS 5-day assessments (AA8b = 1) over previous 12 months (one or more of the items B5a through B5f = 2). Numerator: SNF PPS 5-day assessments (AA8b = 1) with at least one B5a through B5f = 2. Denominator: All SNF PPS 5-day assessments (AA8b = 1). Exclusion: SNF PPS 5-day assessments (AA8b = 1) that do not satisfy the numerator condition AND that have missing data on any item B5a through B5f. Clinical covariate: Indicator of NO prior residential history preceding the current SNF stay for the resident if the following condition is satisfied: There is a recent admission assessment (AA8a = 01) available for the resident AND AB5a through AB5e are not checked (value 0) and AB5f is checked (value 1) on that assessment. 	Regression procedure:	

^{*}Note: This QM is reported both with an additional level of risk adjustment (i.e. with and without the FAP adjustments).

Table A8: Short-Stay Pain	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Short-Stay Residents With Pain Assessments Used:	Title: No comparable QI Assessments Used:
SNF PPS 14-Day assessment: AA8b = 7. Assessment reference date (A3a) must be within 6 months of the end of the target date.	
Numerator: Residents at SNF PPS 14-day assessment with moderate pain at least daily (J2a = 2 AND J2b = 2) OR horrible/excruciating pain at any frequency (J2b = 3).	Numerator:
Denominator: All residents with an SNF PPS 14-day assessment (AA8b = 7) (after exclusions are applied).	Denominator:
Risk adjustment strategies used: Exclusion	Risk adjustment strategies used:
 Exclusions: Residents satisfying any of the following conditions: 1. Either J2a or J2b is missing on the 14-day assessment. 2. The values of J2a and J2b are inconsistent on the 14-day assessment. 3. All residents in a facility with a Post Acute Care Admission Sample size of 0. The Post Acute Care Admission Sample is 0 if there are no residents with a SNF PPS 5-day assessment (AA8b = 1) over previous 12 months. 	Exclusions:
Stratification procedure: None	Stratification procedure:
Regression procedure: FAPNone Clinical covariatesNone	Regression procedure:

Table A9: Short Stay Walking Improvement	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Short-Stay Residents Who Walk as Well or Better on day 14 as on day 5 of their Stay	Title: No comparable QI
Assessments Used:	Assessments Used:
 SNF PPS 14-Day assessment: AA8b = 7. Assessment reference date (A3a) must be within 6 months of the end of the target date. SNF PPS 5-Day assessment: AA8b = 1. Assessment reference date (A3a) must be in the window of 3 days to 18 	
days prior to the selected 14-day assessment.	
• FAP Assessment: SNF PPS 5-Day assessment: AA8b = 1 and reference date (A3a) must be in the 12 months preceding the end of the target period.	
Numerator:	Numerator:
SNF PPS residents who satisfy either of the following conditions: 1) Independence in walking is maintained from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment. (G1c(A)[t-1] = 0 AND G1d(A)[t-1] = 0) AND G1c(A)[t] = 0 AND G1d(A)[t] = 0. OR 2) Improvement in walking ability is evidenced from the SNF PPS 5-day assessment to the SNF PPS 14-day assessment: (G1c(A)[t-1] + G1d(A)[t-1] > G1c(A)[t] + G1d(A)[t]. Note: Values of 8s (activity did not occur) are converted to 4s (total independence) on G1d(A) and G1c(A) for this comparison.	Numerator.
Denominator: All residents with a SNF PPS 14-day assessment (AA8b = 7) and a preceding SNF PPS 5-day assessment (AA8b = 1) (after exclusions are applied).	Denominator:
Risk adjustment strategies used: ExclusionYes StratificationNo	Risk adjustment strategies used:

Table A9: Short Stay Walking Improvement	
Publicly Reported Quality Measure	Corresponding CHSRA QI
Title: The Percentage of Short-Stay Residents Who Walk as Well or Better on day 14 as on day 5 of their Stay	Title: No comparable QI
RegressionYes	
Exclusions:	Exclusions:
Residents satisfying any of the following conditions:	
1. Comatose (B1 = 1) or comatose status unknown (B1 = missing) on the SNF PPS 14-day assessment.	
 End-stage disease (J5c = checked (value 1)) or end-stage disease status unknown (J5c = missing) on the SNF PPS 14- day assessment. 	
3. Resident is receiving hospice care (P1ao = checked) or hospice status is unknown (P1ao=missing) on the SNF PPS 14-day assessment.	
 Ventilator dependent (P1a1 checked (value 1)) or ventilator status is unknown (P1a1 = missing) on the SNF PPS 14-day 	
 assessment. Quadriplegic (I1z = checked (value 1)) or quadriplegic status is unknown (I1z = missing) on the SNF PPS 14-day assessment. 	
6. Paraplegic (I1x = checked (value 1)) or paraplegic status is unknown (I1x = missing) on the SNF PPS 14-day assessment.	
7. G1c(A) or G1d(A) is missing on either the 5-day or 14-day assessment	
8. All residents in a facility with a Post Acute Care Admission Sample size of 0. The Post Acute Care Admission Sample is 0	
if there are no residents with a PPS 5-day assessment (AA8b = 1) over previous 12 months.	
Stratification procedure:	Stratification procedure:
None	
Regression procedure:	Regression procedure:
Facility admission profile: Mean sum of walking in room (G1c(A)) and walking in corridor (G1d(A)) among PPS 5-day	
assessments (AA8b = 1) over previous 12 months.	
Note: Values of 8s (activity did not occur) are converted to	
4s (total dependence) on G1d(A) and G1c(A) before	
summing these items.	
 Exclusion: PPS 5-day assessments (AA8b = 1) with a missing value on G1c(A) or G1d(A). 	